

**SOUND-ABSORBING COMPOSITES AND  
SHIELD DEVICES EMPLOYING SAME**

**ABSTRACT OF THE DISCLOSURE**

5       A sound-absorbing shield device for use in a vehicle  
door comprises a sheet of sound-absorbing material and a thin  
sheet of polymer film. A first face of the polymer film is  
attached to the sound absorbing material and a plurality of  
apertures extending through the polymer film from the first  
10      face thereof to a second face thereof opposite the first face.  
Each aperture is bounded by a hollow protrusion extending from  
the second film face, whereby the apertures and protrusions  
cooperate to form a barrier against moisture or other  
environmental contamination while admitting acoustic energy  
15      therethrough into the sound absorbing material.

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